COTTON CHATS

DRAPER CORPORATION
HOPEDALE, MASSACHUSETTS

COTTON CHATS

TRADE-MARK REG. U.S. PAT. OFF. AND IN CANADA

DRAPER CORPORATION

HOPEDALE MASS

No. 257. JANUARY, 1925.

CAST IRON SHUTTLE EYE IMPROVES ALL WEAVING

Our new Cast Iron Shuttle Eye is now on the market.

During the past two years rumors of improved weaving results from this Eye have reached the trade, for not content with our own experiments we have subjected the Eye to extended mill tests in the weaving of various kinds of cloth before being satisfied that it was in every way the perfected product we had set out to make.

Like most improved inventions, it is simpler in design and construction than any of its predecessors.

Our pictures give a good idea of the new Eye. It is made of cast iron with an inserted steel scroll.

The shape of the Eye has been so simplified that the cuts for fitting to the shuttle are less numerous and weaken the wood less than with the old Eye.

The wide opening above the scroll facilitates threading. The shape of the scroll perfects this threading feature.

The scroll affords a large throat for the filling, and the distance of this throat from the end of the bobbin has been nearly doubled.

The old flannel friction at the throat of the Eye has been eliminated. The new friction is entirely metallic, obtained by drawing the thread around corners.

A steel bushing in the threadhole in the side of the shuttle obviates the use of steel pins set in the wood.

Cast iron is more resistant than brass to the sawing of the thread. With the new Eye it is not necessary to have a steel pin on the underside of the eye. The loosening of this pin was a frequent cause of trouble in the brass eye.

WEAVING ADVANTAGES

Some of the advantages of the new Eye are important forward steps in the art of weaving with automatic looms.

The design of the scroll and the wide opening above it insure quick and accurate threading.

It is difficult, if not impossible, to unthread it in the operation of the loom. In case of this unlikely unthreading, it will automatically thread up again without leaving a defect in the cloth.

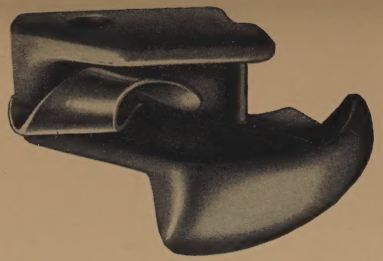
This ease of threading reduces misthreads and seconds to a minimum.

It is less likely to throw a loop around the Eye when the shuttle is improperly boxed and will immediately shed any such loop.

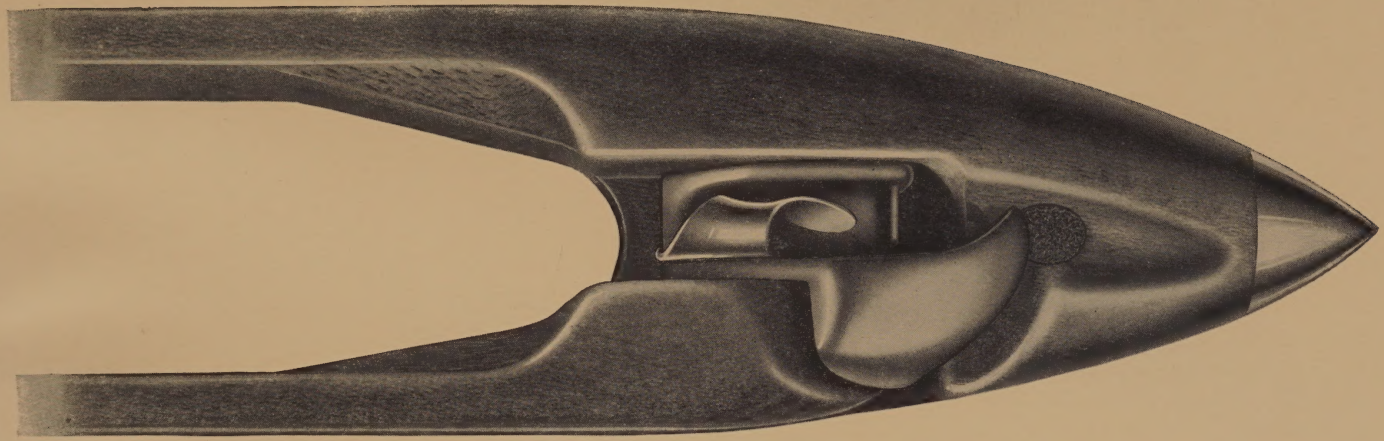
The metallic friction eliminates the common cause of weaving-in trailing ends from an ejected bobbin. Depending for its frictional force upon drawing the thread around corners, it has its maximum effect while the filling is being woven off. When the filling breaks or is cut on transfer of the bobbin by the Feeler, this friction ceases to act on the loose trailing end, which is drawn out by the ejected bobbin. The flannel friction of the brass eye often held this trailing end until it was woven into the cloth.

The metallic friction materially reduces the difference in friction upon filling woven from the start and finish of the bobbin.

SHUTTLE WITH NEW CAST IRON EYE



Easy threading, eliminates weaving-in trailing ends, gives even friction on yarn, reduces filling breaks, improves selvage by preventing "nicks" and will outlast any other eye. One Eye for all cotton yarn from coarse to fine.



The larger filling throat in the scroll, its greater distance from the tip of the bobbin and the absence of the flannel friction at this point insure more even tension on the filling, reduce the number of filling breaks, eliminate "nicks," improve the selvage and make it easy to thread up and weave off partly filled bobbins.

One Eye accommodates all sizes of cotton filling from coarse to fine. This will reduce the number of shuttles carried and simplify a change of weaves.

A different Eye is required for left hand wound filling, but both Eyes fit the same shuttle, and the change can be easily made.

LASTS LONGER AND EASIER TO FIX

The Cast Iron Eye will outlast any shuttle eye ever made. It should wear as long as several shuttles.

By ordering shuttle blanks made by us with accurate cuts in the wood, these Eyes may be used several times.

Because cast iron will not bend, the Eye will not be changed in shape by accidents, and fixers will not change it to cure imaginary faults.

Being proof against accidental changes and resistant to the wear of the dragging thread, the Eye continues serviceable for a long time.

Inserting a new scroll is a simple matter.

With less wood cut away, the shuttle is stronger. The Eye is designed to back up the wood when the shuttle is squeezed. This adds to the life of the shuttle.

The Cast Iron Eye is the culmination of our more than 30 years' experience with self-threading shuttles for automatic weaving. It was conceived in a desire to overcome every known defect developed by other eyes. We believe it is the most important shuttle improvement since the invention of the self-threading eye.

COTTON CHATS

TRADE-MARK REG. U.S. PAT. OFF.

DRAPER CORPORATION

HOPEDALE MASS.

No. 258. MARCH, 1925.

A FEELER THAT WILL NOT ROUGH UP THE FILLING

One of the drawbacks to making fine goods on automatic looms has always been the danger of injury to fine yarns or those of soft twist by the constant action of the Feeler.

A Feeler is a necessary equipment of the automatic loom where the pick is to be matched.

Every Feeler heretofore used has had to come in contact with the yarn on the bobbin or cop in the running shuttle every second pick, that is every time the shuttle was boxed on the side of the loom where the Feeler is located.

This contact between the Feeler and yarn is always at the same point on the bobbin, of necessity fairly close to the butt of the bobbin. The number of times this contact is repeated depends upon the size and length of yarn on the bobbin, the number of picks the bobbin would run before a change to a fresh bobbin.

These repeated blows of the Feeler upon the yarn are delivered with considerable force. With filling of finer counts or softer twist damage to the yarn is likely.

Sometimes the yarn is cut or so weakened that the bobbin is thrown out too soon, making too much waste. Sometimes the filling is so marked that a bad place is made in the cloth. With silk filling the lustre of the yarn has been injured.

At times these defects have caused makers of fine goods to hesitate to use automatic looms.

CURING THE TROUBLE

For years development of the Feeler was naturally directed towards an improved mechanism to insure accurate gauging of the yarn left on the bobbin at the time of transfer, that filling waste on ejected bobbins might be reduced to the minimum and kept as nearly even as possible on all bobbins.

A high degree of success in this direction was attained with our Stimpson Sliding Feeler.

The next step in Feeler development called for elimination of the bruising of fine yarns by the blows of the Feeler blade.

This happy result has been attained with the invention of our Intermittent Feeler, whose blade comes in contact with the yarn on the bobbin only once in every 64 picks until one of these contacts shows that the filling has been woven off to the point where steady operation of the Feeler is necessary. By this time the amount of filling on the bobbin is so small that the layer of filling engaged by the Feeler is woven off before the blade again touches the yarn. The Feeler continues to operate every second pick until the bobbin is changed.

Sixty-four is an arbitrary number selected as commonly desirable. If there is reason to do so, the Feeler may be arranged to feel after 32 or 40 or any other number of picks. It is simply a matter of keeping the Feeler blade away from the yarn as much as possible and still have it start to operate in time to change the bobbin at the proper

time. Feeling every 64th pick has met these conditions on all yarns so far tried.

Briefly, here is the way the new Feeler operates:

After a bobbin transfer, on the first boxing of the shuttle in the left hand box, the Feeler blade comes in contact with the yarn. Unless the bobbin is an empty one or nearly so, the Feeler is pushed back and locked for the next 64 picks, when the blade is released and the operation is repeated. This continues intermittently at intervals of 64 picks until the amount of yarn left on the bobbin is not large enough to force the blade back to the locking point. The Feeler is then free to operate like any other Feeler and continues to do so until the transfer is made.

Transfer of the bobbin and setting for the amount of waste is the same as for our regular Sliding Feeler.

WHAT IS GAINED

The advantages of the new Feeler may be summarized as follows:

While the main part of the yarn is being woven off and the Feeler is engaging the same yarn surface, the new Feeler touches the yarn once where the old one delivered 32 blows.

When the filling has been woven off to the point that brings continuous operation of the Feeler, a new layer of yarn is presented for each new Feeler contact.

This eliminates bruising, chafing and cutting yarns by the Feeler, which increased waste and often made bad places in the cloth.

It prevents destroying the lustre of silk filling, which always made a defect in the finished cloth.

With a large part of the present needless work of the Feeler eliminated, there is less wear and tear on the parts of this rather delicate mechanism.

The setting of the parts is less likely to become disarranged.

There is less loom fixing.

It is possible to use Feeler blade tips of material suitable for delicate yarns but too soft to stand the constant hammering of the old-style Feeler.

MORE YARN ON THE BOBBIN

Have you ever figured out just what saving you would make if you could get more yarn on your bobbins?

Your spinning frames would run longer and make more yarn on each doff.

Each bobbin would run longer in the loom.

There would be more picks in the cloth for each filling change.

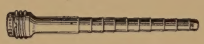
The work of filling the batteries would be reduced.

There would be less chance for bad places in the cloth.

You would use less bobbins per day. You would have to buy fewer bobbins.

If you are running Feelers, fewer bobbins mean less filling waste.

It would pave the way to more looms per weaver.



There are various ways of getting more yarn on the bobbin.

If your filling bobbins are not now filled to capacity, there are spindle and bobbin improvements that will help.

You may use longer bobbins. Both spinning and looms can be changed to fit them.

You may increase the diameter of the yarn on the bobbin. Larger rings and changes in shuttles and loom batteries are usually required.

If your weave will allow a larger or longer shuttle, these things are worth talking over.

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TRADE-MARK REG. U.S. PAT. OFF.

DRAPER CORPORATION

HOPEDALE MASS.

No. 259. APRIL. 1925.

A FEELER THAT MAKES LESS FILLING WASTE

The Intermittent Feeler, described in March Cotton Chats, was designed to prevent bruising of delicate yarns.

Improvements made for that purpose in control and operation of the Feeler blade are showing striking results in saving filling waste on all classes of goods. In meeting special requirements, a mechanism has been produced that excels wherever a Feeler is needed.

A minimum of filling waste has been the aim of Feeler designers.

Successive Feelers have shown improvement.

Uniformity in amount of filling waste left on the bobbins has been equally important.

Success in this particular has not been notable.

In fact, failure to attain uniformity in waste has been the chief cause of lack of success in securing minimum of waste.

Feelers have been designed to give a certain amount of waste. In operation the yarn left on the bobbins thrown out varied. Variation increased waste. It prevented a close setting of the Feeler, which further increased the quantity of yarn left on every bobbin.

UNIFORMITY IN WASTE SECURED

Uniformity in waste is secured by the Intermittent Feeler.

The mechanism designed to control the intermittent action of the Feeler presses the Feeler blade with an even firmness against the bobbin as the time of transfer approaches. This prevents uncertainty of action. Lack of this firm control of the Feeler blade has been one cause of uneven operation of previous Feelers.

The positive action of the Intermittent Feeler gives accuracy in operation and uniformity in waste left on the ejected bobbins.

Tests made in mills under regular running conditions—practical, not laboratory tests—show that uniformity in waste is not merely a possibility but the inevitable result with the Intermittent Feeler. The bobbins in the bobbin cans all looked alike.

Regularity makes possible a close setting of the Feeler so that the smallest practicable amount of waste may be attained.

Mills that bought Intermittent Feelers for special yarns are ordering more to replace Feelers for all yarns. They want them because they make less filling waste. Waste is expensive whether the raw material is silk, worsted or cotton. Waste means that just so much raw material and all labor put into it in the preparatory processes fails to appear in the finished cloth. It increases the cost of every pound of cloth produced.

COSTS LESS TO OPERATE

The Intermittent Feeler is less expensive to operate. It requires less fixing; calls for fewer repairs.

Other Feelers operate every second pick; the Intermittent Feeler every 64th pick, except for the brief time it operates continuously just before the bobbin is changed.

Any operation of the Feeler except on the first pick after a bobbin transfer and for a short time before the yarn is woven off is an evil—necessary heretofore, but expensive in wear and tear on both yarn and Feeler parts.

We know that constant operation of the Feeler injures the yarn. Even coarse yarn has been cut and waste thereby increased.

We know that constant operation of the Feeler wears out the Feeler tip. Worn tips injure the yarn or bring defective operation.

We know that constant operation of the Feeler wears out Feeler blades, springs and other operating parts that must be replaced.

We know that constant operation of the Feeler has a tendency to disarrange the setting of the parts and make work for the loomfixer.

Reducing the number of times the Feeler operates in the ratio of 32 to 1 reduces the danger of damage to the yarn; reduces the cost of repairs; reduces the work of the loomfixer—and in direct proportion, to about one-thirtieth of what these are with other Feelers.

DOES IT PAY TO REPLACE

New mechanisms on machines in use, like improved machinery, justify investment only when they offer substantial returns in reduced costs or improved product—and then they become necessities.

The price of the Intermittent Feeler is a little higher than for other Feelers. It costs more to make it.

It costs less to run it—in repairs, in loom fixing, in waste made.

Throwing out present Feelers and replacing them with the Intermittent Feeler calls for a considerable investment where the quantity needed is large.

What is your present loss on filling waste? That is not investment. It is a weekly, monthly, annual dead loss. It takes money that in your annual statement—if

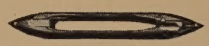
you were to put it there—would make a bad showing. It is a forced investment on which you get no returns. It pays no dividends. It reduces dividends on other investment.

Improved machinery pays for itself when it reduces "forced investments" that do not pay dividends and turns waste into profits.

Five dollars, ten dollars per loom for investment for improvements. Ten per cent will pay interest on the money and depreciation. What is your annual bill for filling waste?

How large an investment can you afford to make to reduce that needless loss by one-half, two-thirds or three-quarters?

Saving in waste quickly becomes a sizable item in comparative costs with present prices of raw material.



Don't make the mistake of thinking that the Intermittent Feeler will cure the other fellow's troubles but has no application to yours.

Are you trying to keep filling waste about the same on all bobbins—and find you can't do it?

Then you need the Intermittent Feeler.

Are you making too much filling waste?

Then you need the Intermittent Feeler.

Do your Feelers show the effect of constant operation in repair bills and cost of fixing?

Then you need the Intermittent Feeler.

Is your fixer overloaded because of the frequent call to reset Feelers?

Then you need the Intermittent Feeler.

Is your overseer worried by any sort of Feeler trouble or complaints about filling waste?

Then you need the Intermittent Feeler.